

Claims 1-13 and 15: canceled

Claims 28-29: withdrawn

REMARKS

The Applicants acknowledge the Office Action of April 20, 2005 with appreciation. Claims 14 and 16-29 are pending in the application. Claims 14, 17-20 and 23-27 are presently under examination.

The Office acknowledges references cited in the Information Disclosure Statement, Form PTO-1449; however, the Chemical Abstracts that were provided to the Office with the Response of January 31, 2005, with the exception of Vol. 128, 1998, 85834j, were not considered. As the Chemical Abstracts are found in the Private PAIR retrieval system in NPL Documents of February 2, 2005, Applicants enquire as to why the Chemical Abstracts were not considered. The Applicants respectfully request consideration of the Chemical Abstracts provided with the Information Disclosure Statement of January 31, 2005.

The Office acknowledges Claims 27-29, newly added with the Response and Amendment of January 31, 2005. The Office concludes that Claims 28 and 29, read on a non-elected invention, specifically to antisense technology. Consequently, Claims 28-29 are withdrawn from consideration.

The subject matter of these claims are drawn to the elected SEQ ID NO:2 and the orientation of the sequence of SEQ ID NO:2 relative to the regulatory elements. It is improper for the Office to read additional limitations into the claims. Claims 28 and 29 are presently withdrawn from consideration without prejudice as to their rejoinder following identification of allowable subject matter.

The Office rejects Claims 18, 23-24 and 27 under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement, specifically alleging prohibited new matter.

With the Response After Final, the Applicants amend Claim 14 and Claim 19 to delete the language "and non-functional derivatives thereof". The Applicants submit that the amendment obviates the written description rejection.

With regard to Claim 27, the Office requests identification of the location in the instant Specification where support for the amendment to nucleic acids of Claim 14 which encode SEQ ID NO:3 may be found.

The Applicants invite the Office to consider the instant Specification, at page 8, line 23, wherein it is disclosed that the nucleic acid sequence according to SEQ ID NO:2 represents the cDNA sequence of the twisted dwarf gene from *Arabidopsis thaliana*. Further on page 9, line 1, it is stated that the amino acid sequence of the twisted dwarf protein according to SEQ ID NO:3 represents the amino acid sequence of the twisted dwarf protein from *Arabidopsis thaliana*. The relationship between the coding sequence of SEQ ID NO:2 and the amino acid sequence of SEQ ID NO:3 is further demonstrated in Figure 1. The Applicants submit that compliance with the Office request to identify the location in the Specification for support for the claim to an isolated nucleic acid of claim 14 which encodes a polypeptide of the sequence set forth in SEQ ID NO:3 has been met.

The Office maintains the rejection of Claims 14, 17-20 and 23-26 under 35 U.S.C. § 112, first paragraph, for lack of written description. The Office contends that the Applicants have not described a representative number of polynucleotide sequences encoding a TWD protein falling within the scope of the broad genus of polynucleotides that are non-functional derivatives of SEQ ID NO:2. The Office concludes that the Specification only describes a single DNA sequence of SEQ ID NO: 2 (Office Action of July 29, 2004, page 5).

With the Response After Final, the Applicants amend the claims to encompass an isolated nucleic acid comprising the sequence set forth in SEQ ID NO:2 which the Office considers sufficiently described.

The Office maintains the rejection of Claims 14, 17-20 and 23-26 under 35 U.S.C. § 112, first paragraph, for lack of enablement. The Office concludes the Specification is not enabled for the broad claims to a non-functional derivative of SEQ ID NO:2, a vector, or method for the production of plants, cells, or seeds comprising said sequence, or methods of homologous recombination.

With the instant amendment, Claim 14 is limited to an isolated nucleic acid comprising the sequence of SEQ ID NO:2. The Office basis for rejection in view of the language “non-functional derivatives thereof” is rendered moot by cancellation of the language from the generic claim.

The Office contends that the Applicants have not disclosed how one would use a plant transformed with a nucleic acid encoding SEQ ID NO:2 and that the Applicants have not disclosed a plant exhibiting any new trait or characteristic when the nucleic acid of SEQ ID NO:2 is transformed into a plant.

The Applicants submit that the Office request to provide disclosure of how one skilled in the art might use a plant transformed with the nucleic acid of SEQ ID NO:2 is improper in view of the claim scope, i.e., all claims are drawn to the nucleic acid of SEQ ID NO:2, which is described with particularity to permit those skilled in the art to make and use the invention. Furthermore, the instant Specification provides several examples for the use of the nucleic acid of SEQ ID NO:2, at least at page 10, line 7; page 13, line 20; page 10, line 27 and provides working examples of transformation of plants with the instant nucleic acid.

The Office maintains the rejection for lack of enablement on the basis that the Applicants have not disclosed a plant exhibiting any new trait or characteristic when the instant nucleic acid is transformed into a plant. In Example 3, the Applicants provide a method of using the nucleic acid of SEQ ID NO:2 and demonstrate that transgenic plants transformed with the nucleic acid of SEQ ID NO:2 exhibited growth characteristics unlike plants not expressing the instant nucleic acid. There is no requirement that the starting plant be a wild type plant to demonstrate that the instant nucleic acid, when transformed into a plant, exhibits an effect on plant

architecture. Consequently, the instant nucleic acid comprising the sequence of SEQ ID NO:2 is enabled by the Specification disclosure and by the working examples embodying the use of such nucleic acids. In view of these remarks, it is submitted that compliance with the enablement requirement is met.

Reconsideration and withdrawal of the rejection is respectfully solicited.

The Office maintains the rejection of Claims 14 and 17-18 under 35 U.S.C. 102(b) as being anticipated by Peattie, et al., (U.S. Patent No. 5,763,590). The Office concludes that Peattie, et al. disclose a nucleic acid sequence that comprises at least one base pair; therefore, Peattie, et al. anticipate the claimed invention.

The rejection for anticipation of Claims 14, 17-18 and 24-26 under 35 U.S.C. 102(b) by Holt, KA., (U.S. Patent No. 5,886,791) is maintained in the instant Office Action. The Office concludes that Holt disclose a nucleic acid sequence that comprises at least one base pair; therefore, Holt anticipate the claimed invention.

The Applicants rebut the Office conclusion of anticipation under 35 U.S.C. 102(b) over Peattie, et al. and Holt, KA., on the basis that the prior art do not teach or reasonably suggest the instant nucleic acid comprising the sequence of SEQ ID NO:2.

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Accordingly, reconsideration of all grounds of objection and rejection, withdrawal thereof, and passage of this application to issue are all hereby respectfully solicited.

It should be apparent that the undersigned attorney has made an earnest effort to place this application into condition for immediate allowance. If he can be of assistance to the Examiner in the elimination of any possibly-outstanding insignificant impediment to an immediate allowance, the Examiner is respectfully invited to call him at his below-listed number for such purpose.

Allowance is solicited.

Respectfully submitted,

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Enclosure: Listing of Claims; Extension of Time Fee, a check in the amount of \$120.00 and Postal Card Receipt.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY FURTHER OR ADDITIONAL FEES WHICH MAY BE REQUIRED (DUE TO OMISSION, DEFICIENCY, OR OTHERWISE), OR TO CREDIT ANY OVERPAYMENT, TO DEPOSIT ACCOUNT NO. 08,3220.